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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,715	09/29/2006	Sureshchandra B. Patel		2121

7590 11/19/2009  
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CANADA

EXAMINER
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NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

MAIL DATE	DELIVERY MODE
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11/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,715	<b>Applicant(s)</b> PATEL, SURESHCHANDRA B.	
	<b>Examiner</b> MICHAEL P. NGHIEM	<b>Art Unit</b> 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2008 and 23 July 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

The Amendment filed on July 23, 2009 has been considered.

### *Specification*

A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the marked-up sub-specification does not correspond with the clean sub-specification. The two versions of the sub-specification do not have at least the same paragraph 0062 (the equations in paragraph 0062 of the clean version do not have the square roots symbols as described in the marked-up version. The clean version has divisor =  $q$ , the marked-up version has divisor = 3.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification

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contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Appropriate correction is required.

The disclosure is objected to because of the following informalities: "I think" (specification filed September 29, 2006, paragraph 075, line 2) should be deleted.

Appropriate correction is required.

### ***Drawings***

The drawings filed on August 21, 2008 are not acceptable because:

1/ Numbers, letters are small, 37 CFR 1.84(p)(3): See Figs. 1a, 1b, 3a, and 3b.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the means for defining and solving, machine control means, excitation elements, rotation machines, transformer tap position control means (e.g. claim 22), slack/reference generator, rotating machine (e.g. claim 23), transformer (e.g. claim 24), machine control means, transformer tap changing element (e.g. claim 25) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 19 and 20 are objected to because of the following informalities:

- claim 19, "effecting" (last paragraph), should be – affecting –.
- claim 19, after "generators" (e.g. line 6), should insert – with --.
- claim 19, do equations (35) and (36) require square roots?
- claim 19, "the slack/reference node" (line 15) should be -- the reference/slack node --.
- claim 19, "say" (line 32) should be deleted.

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- claim 19, "loadflow calculation" (lines 62-63) should be -- loadflow computation -  
-.

- claim 20, is equation (27) part of claim 20?

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19,

- "the power network" (line 1), "the network components" (line 4), "the load-nodes" (line 10), "which" (line 13), "the slack-start" (line 16), "the power network nodes" (line 19, "the calculation of power flowing" (lines 19-20), "the level of outward connectivity", "the node" (line 32), "the over loaded power network components" (line 60), "the network nodes" (line 61), "the power flowing through network components" (line 66) lack antecedent basis.

- are the real and reactive power at PQ-nodes (lines 9-10) related to the Real-Power-P and Reactive-Power-Q (line 10)?

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- how are the reactive power generation and transformer tap-position indications (lines 20-21) related to the performing load-flow computation?

Claim 20, "equation (27)" (line 4) lacks antecedent basis.

Claim 22, "the Parallel Loadflow calculation model" (line 9) and "the excitation elements" (line 16) lack antecedent basis.

Claims 22 and 25, "means plus function" limitations (e.g. machine control means, claim 22, line 15, transformer tap position control means, claim 22, line 22) are not in the proper format (i.e., means for ...). Please make sure that all means plus functions limitations are corrected.

Claim 25, "said machine control means" (line 1) and "said transformer tap changing element" (line 4) lack antecedent basis.

Claim 26, "said Parallel Loadflow calculation model" (line 9) and "the excitation elements" (line 14) lack antecedent basis.

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

***Allowable Subject Matter***

Claims 19-27 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Reasons for Allowance***

The combination as claimed wherein a method of forming/defining and solving a model of the power network comprising initializing, at the beginning of each new iteration, a vector of dimension equal to the number of nodes in a network with each element value zero, solving all sub-networks in parallel using available solution estimate at the start of the iteration, adding newly calculated solution estimates for a node resulting from different sub-networks, say 'q' number of sub-networks, in which the node is contained, in a corresponding vector element that gets initialized zero at the beginning of each new iteration, counting the number of additions and calculating new solution estimate or corrections to the available solution estimate by taking the average or root mean square value using any relevant relations in the following depending on the loadflow calculation method used, and storing the new solution estimate at the end of the current iteration as initial available estimate for the next iteration (claim 19) is not disclosed, suggested, or made obvious by the prior art of record.



***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Examiner has made a diligent effort to address the numerous informalities in this office action and in the prior office action. However, Applicant is requested to make sure that all remaining informalities (if any, e.g., lack of antecedent basis, claimed device/means limitations that are not shown, improper means plus function format, etc. ...) in the claims, drawings, and specification are corrected. To avoid many of the antecedent basis issues, please use consistent claim terminologies.

Regarding the drawing objections, Figs. 1a, 1b, 3a, and 3b filed on August 21, 2008 are not acceptable because numbers and letters are small (please refer to 37 CFR 1.84(p)(3) ).

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael P. Nghiem/

Primary Examiner, GAU 2863

November 14, 2009